

*ABSTRACT OF THE DISCLOSURE*

An elasto-plastic socket for Land or Ball Grid Array package comprising a plurality of metal contacts embedded in a substrate by lamination. The curved plate spring of the metal contacts enable large deformation to accommodate all tolerances other than package tolerance and ensure uniform contact pressure across the package because they are designed based on the application of elasto-plasticity theory. An elasto-plastic stiffener shares the pressure from heat sink to package substrate and semiconductor. A cutting edge subsystem assembly for Land or Ball Grid Array package integrates L/BGA socket, L/BGA package and heat sink with a frame on top of PCB to increase the stiffness. The methods of post manufacturing including post forming and post age hardening used for testing socket application can increase the durability.